

## APPENDIX E

### ENGINEERING CAPABILITY TABLES

*Table E-1. Equipment assumptions, engineer battalion (combat heavy)*

ENGINEER LINE COMPANY*		
EQUIPMENT CATEGORY	EQUIPMENT	LINE ITEM NO.
Lift/load	25-ton crane (1)	F43429
Grading	Grader (3)	G74783
Compacting	Pneumatic roller (1)	S11793
	Vibratory roller (1)	S12916
	Sheepsfoot roller, SP (1)	E61618
Hauling	Scraper (4)	S56246
	5-ton dump truck (6)	X43708
Excavating	Dozer, ME (3)	W83529
	Dozer, ME (2)	W76816
	Scoop loader (2)	L76556
	Backhoe (2)	W91074
HEADQUARTERS AND SUPPORT COMPANY**		
EQUIPMENT CATEGORY	EQUIPMENT	LINE ITEM NO.
Lift/load	12-1/2-ton shovel (1)	F43364
Compacting	Roller, steel wheel (1)	S11711
	Roller, pneumatic (2)	S11793
Hauling	20-ton dump truck (9)	X44403
Excavating	5-cubic -yard scoop loader (2)	L76321
	Dozer, HV (3)	W88575
	Dozer, HV (3)	W88699
Concrete Mixing	8-cubic-yard concrete truck (3)	T42725
Bitumen Distribution	Tank truck (2)	G27844

\*Each engineer line company in the battalion contains the productive equipment listed (for AFCS estimating purposes).

\*\*The engineer support company in the battalion contains the productive equipment listed (for AFCS estimating purposes).

Table E-2. Engineer unit capability table, engineer battalion (combat heavy) 5-415L

	NO. OF PERSONNEL	MAN-HOURS/DAY*
TOTAL UNIT STRENGTH	634	-
VERTICAL CONSTRUCTION SKILLS:		
Carpenter/Mason	72	720
Electrician	18	180
Plumber/Pipe Fitter	18	180
Metal Worker/Welder	-	-
EFFECTIVE VERTICAL MAN-HOURS/DAY	-	1,080
	PIECES OF EQUIPMENT	EQUIPMENT-HOURS/DAY*
HORIZONTAL CONSTRUCTION EQUIPMENT:		
Lift/load Equipment	6	60
Grading Equipment	9	90
Compaction Equipment	12	120
Hauling Equipment	39	390
Excavation Equipment	32	320
Concrete Mobile Equipment	3	30
Bitumen Distributor Equipment	2	20
Asphalt Paving/Rolling Equipment	-	-
EFFECTIVE HORIZONTAL MAN-HOURS/DAY	-	1,030

\*Productive man/equipment hours per 10-hour day.

*Table E-3. Engineer unit capability table, headquarters and support company  
engineer battalion (combat heavy) 5-416L*

	NO. OF PERSONNEL	MAN-HOURS/DAY*
TOTAL UNIT STRENGTH	217	-
VERTICAL CONSTRUCTION SKILLS:		
Carpenter/Mason	-	-
Electrician	-	-
Plumber/Pipe Fitter	-	-
Metal Worker/Welder	-	-
EFFECTIVE VERTICAL MAN- HOURS/DAY	-	-
	PIECES OF EQUIPMENT	EQUIPMENT-HOURS/DAY*
HORIZONTAL CONSTRUCTION EQUIPMENT:		
Lift/load Equipment	3	30
Grading Equipment	-	-
Compaction Equipment	3	30
Hauling Equipment	9	90
Excavation Equipment	8	80
Concrete Mobile Equip- ment	3	30
Bitumen Distributor Equip- ment	2	20
Asphalt Paving/Rolling Equipment	-	-
EFFECTIVE HORIZONTAL MAN- HOURS/DAY	-	280

\*Productive man/equipment hours per 10-hour day.

*Table E-4. Engineer unit capability table ,  
headquarters and support company engineer battalion (combat heavy) 5-417L*

	NO. OF PERSONNEL	MAN-HOURS/DAY*
TOTAL UNIT STRENGTH	139	-
VERTICAL CONSTRUCTION SKILLS:		
Carpenter/Mason	24	240
Electrician	6	60
Plumber/Pipe Fitter	6	60
Metal Worker/Welder	-	-
EFFECTIVE VERTICAL MAN-HOURS/DAY	-	360
	PIECES OF EQUIPMENT	EQUIPMENT-HOURS/DAY*
HORIZONTAL CONSTRUCTION EQUIPMENT:		
Lift/load Equipment	1	10
Grading Equipment	3	30
Compaction Equipment	3	30
Hauling Equipment	10	100
Excavation Equipment	8	80
Concrete Mobile Equipment	-	-
Bitumen Distributor Equipment	-	-
Asphalt Paving/Rolling Equipment	-	-
EFFECTIVE HORIZONTAL MAN-HOURS/DAY	-	250

\*Productive man/equipment hours per 10-hour day.

Table E-5. Engineer unit capability table, engineer company pipeline construction 5-434L

	NO. OF PERSONNEL	MAN-HOURS/DAY*
TOTAL UNIT STRENGTH	153	-
VERTICAL CONSTRUCTION SKILLS:		
Carpenter/Mason	33	330
Electrician	-	-
Plumber/Pipe Fitter	18	180
Metal Worker/Welder	9	90
EFFECTIVE VERTICAL MAN-HOURS/DAY	-	600
	PIECES OF EQUIPMENT	EQUIPMENT-HOURS/DAY*
HORIZONTAL CONSTRUCTION EQUIPMENT:		
Lift/load Equipment	5	50
Grading Equipment (Dozer)	2	20
Compaction Equipment	-	-
Hauling Equipment	-	-
Excavation Equipment	3	30
Concrete Mobile Equipment	-	-
Bitumen Distributor Equipment	-	-
Asphalt Paving/Rolling Equipment	-	-
EFFECTIVE HORIZONTAL MAN-HOURS/DAY	-	100

\*Productive man/equipment hours per 10-hour day.

Table E-6. Engineer unit capability table, engineer company port construction 5-603L

	NO. OF PERSONNEL	MAN-HOURS/DAY*
TOTAL UNIT STRENGTH	206	-
VERTICAL CONSTRUCTION SKILLS:		
Carpenter/Mason	24	240
Electrician	6	60
Plumber/Pipe Fitter	4	40
Metal Worker/Welder	10	100
EFFECTIVE VERTICAL MAN-HOURS/DAY	-	440
	PIECES OF EQUIPMENT	EQUIPMENT-HOURS/DAY*
HORIZONTAL CONSTRUCTION EQUIPMENT:		
Lift/load Equipment (including pile driving)	7	70
Grading Equipment	1	10
Compaction Equipment	-	-
Hauling Equipment	4	40
Excavation Equipment	4	40
Concrete Mobile Equipment	1	10
Bitumen Distributor Equipment	-	-
Asphalt Paving/Rolling Equipment	-	-
EFFECTIVE HORIZONTAL MAN-HOURS/DAY	-	170

\*Productive man/equipment hours per 10-hour day.

Table E-7. Engineer unit capability table, engineer company dump truck 5-424L

	NO. OF PERSONNEL	MAN-HOURS/DAY*
TOTAL UNIT STRENGTH	78	-
VERTICAL CONSTRUCTION SKILLS:		
Carpenter/Mason	-	-
Electrician	-	-
Plumber/Pipe Fitter	-	-
Metal Worker/Welder	-	-
EFFECTIVE VERTICAL MAN-HOURS/DAY	-	-
	PIECES OF EQUIPMENT	EQUIPMENT-HOURS/DAY*
HORIZONTAL CONSTRUCTION EQUIPMENT:		
Lift/load Equipment	-	-
Grading Equipment	-	-
Compaction Equipment	-	-
Hauling Equipment	30	300
Excavation Equipment	-	-
Concrete Mobile Equipment	-	-
Bitumen Distributor Equipment	-	-
Asphalt Paving/Rolling Equipment	-	-
EFFECTIVE HORIZONTAL MAN-HOURS/DAY	-	300

\*Productive man/equipment hours per 10-hour day.

Table E-8. Engineer unit capability table, engineer company construction support 5-413L

	NO. OF PERSONNEL	MAN-HOURS/DAY*
TOTAL UNIT STRENGTH	161	-
VERTICAL CONSTRUCTION SKILLS:		
Carpenter/Mason	-	-
Electrician	-	-
Plumber/Pipe Fitter	-	-
Metal Worker/Welder	-	-
EFFECTIVE VERTICAL MAN-HOURS/DAY	-	-
	PIECES OF EQUIPMENT	EQUIPMENT-HOURS/DAY*
HORIZONTAL CONSTRUCTION EQUIPMENT:		
Lift/load Equipment	-	-
Grading Equipment	-	-
Compaction Equipment	-	-
Hauling Equipment	-	-
Excavation Equipment	-	-
Concrete Mobile Equipment	-	-
Bitumen Distributor Equipment	-	-
Asphalt Paving/Rolling Equipment	7	70
EFFECTIVE HORIZONTAL MAN-HOURS/DAY	-	70

\*Productive man/equipment hours per 10-hour day.